Version With Markings To Show Changes Made

In the specification

The following paragraph has been added on page 1, following the title:

This application is a continuation of International Application No. PCT/GB00/03573, filed September 18, 2000, the entire contents of which are incorporated herein by reference.

In the Claims

Claims 21 and 25 have been cancelled without prejudice or disclaimer.

Claims 28-41 have been added.

Claims 1-20, 22-24, and 26-27 have been amended as follows:

1. (Amended) [A] An isolated Glutathione-S-transferase (GST) comprising [the] an amino acid sequence [depicted as SEQ ID No. 10 or a variant GST] having at least about 80% identity [therewith with the *proviso* that said variant GST] with SEQ ID NO:10, wherein said GST does not comprise [the] an amino acid sequence [depicted as SEQ ID No. 36] characterized by SEQ ID NO: 36.

2. (Amended) [A] The GST [or variant GST] according to claim [1 which] 1, wherein said GST is capable of conferring resistance [and/or] or tolerance upon a plant to [a] an herbicide which comprises at least one of fomesafen [and/or] and acifluorfen.

3. (Amended) [A] An isolated polynucleotide comprising a region which encodes [a] the GST [or a variant GST] according to claim 1 [or claim 2].

4. (Amended) [A] The polynucleotide according to claim [3] 3, wherein said polynucleotide comprises [comprising the] a nucleotide sequence [depicted as SEQ ID No. 14] characterized by SEQ ID NO:14.

5. (Amended) [A] An isolated polynucleotide sequence which is [the complement of one] complementary to a sequence which binds to [a] the polynucleotide according to claim 3 [or claim 4] at a temperature of between about 60°C and about 65°C in 0.3 strength citrate buffered saline containing 0.1% SDS followed by rinsing at [the same] said temperature with 0.3 strength citrate buffered saline containing 0.1% [SDS]

SDS, wherein said polynucleotide sequence [still encodes a functional GST with the *proviso* that said polynucleotide sequence is not the sequence depicted as SEQ ID No. 38] comprises a region which encodes a GST, and wherein said polynucleotide sequence is not characterized by SEQ ID NO: 38.

6. (Amended) [A] An isolated protein comprising [the] an amino acid sequence [depicted as SEQ ID No.1 or a protein variant] having at least about 70% identity [therewith] with SEQ ID NO:1, wherein said protein [or variant] is capable of catalyzing [the] an addition of Beta-alanine [onto] to gamma glutamylcysteine.

7. (Amended) [A] The protein [variant] according to claim [6 having] 6, wherein said protein exhibits a Km for Beta-alanine which is less than [the] said protein's [variants] Km for glycine when said Km for Beta-alanine and said Km for glycine are calculated using [the same] an identical method.

8. (Amended) [A] The protein [variant] according to claim [7 having a] 7, wherein said Km for Beta-alanine [which] is less than or equal to about 0.8 mM and [a] said Km for glycine [which] is higher than 0.8 mM [when calculated using the same method].

9. (Amended) [A] The protein [variant] according to claim [7 or 8 which variant comprises] 7, wherein said protein comprises an amino acid sequence [selected from the group depicted as SEQ ID No. 2, 3, 4 or 5] characterized by at least one of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, and SEQ ID NO:5.

10. (Amended) [A] An isolated polynucleotide comprising a region encoding the protein [or protein variant] according to claim 6 [any one of claims 6 to 9].

11. (Amended) [A] The polynucleotide according to claim [10 which comprises] 10, wherein said polynucleotide comprises a [the] sequence [depicted as SEQ ID No. 6] characterized by SEQ ID NO:6.

12. (Amended) [A] An isolated polynucleotide [comprising] comprising:

(a) a first region comprising a polynucleotide [according to any one of claims 3 to 5] encoding the GST according to claim 1; and

(b) a second region comprising a polynucleotide [according to claim 10 or 11] encoding a protein comprising an amino acid sequence having at least about 70% identity with SEQ ID NO:1, wherein said protein is capable of catalyzing an addition of Beta-alanine to gamma glutamylcysteine.

13. (Amended) [A] The polynucleotide according to claim 12 wherein said first region comprises a polynucleotide encoding [the] an amino acid sequence [depicted as SEQ ID No. 10] characterized by SEQ ID NO:10 and said second region comprises a polynucleotide encoding [the] an amino acid sequence [depicted as SEQ ID No. 1] characterized by SEQ ID NO:1.

14. (Amended) A DNA construct comprising [in sequence] a plant operable promoter operably linked to [a] the polynucleotide according to claim 3 [any one of claims 3, 4, 5, 10, 11, 12 or 13] which is operably linked to a transcription termination region.

15. (Amended) A method of providing a plant [plants] which [are] is resistant [and/or] or tolerant to an [agrochemical] agrochemical, the method comprising:

(a) inserting the polynucleotide of claim 3 into [the] a genome of plant material [a polynucleotide or a polynucleotide sequence according to any one of claims 3, 4, 5, 10, 11, 12 or 13 or a DNA construct according to claim 14] from a plant; [and]

(b) regenerating at least one plant [plants] or plant part [parts] therefrom; [and]

(c) applying to said [plants or plant parts] plant or plant part [an] a phytotoxic amount of said [agrochemical which is phytotoxic to control like plants and selecting those plants or plant parts which are resistant to said agrochemical.] agrochemical; and

(d) selecting at least one plant or plant part which is resistant or tolerant to said agrochemical.

16. (Amended) [A] The method according to claim 15 wherein the polynucleotide inserted into said plant material encodes an amino acid sequence characterized by SEQ ID NO:10 [depicted as SEQ ID No. 10].

17. (Amended) A method of providing a plant [plants] which [are] is resistant [and/or] or tolerant to an [agrochemical] agrochemical, the method comprising:

(a) inserting the polynucleotide of claim 10 into [the] a genome of plant material from a plant which [provides for the production of a functional GST, a polynucleotide according to any one of claims 10 to 13 or a DNA construct according to claim 14] produces a functional GST; [and]

(b) regenerating at least one plant [plants] or plant part [parts] therefrom; [and]

(c) applying to said [plants or plant parts] plant or plant part [an] a phytotoxic amount of said [agrochemical which is phytotoxic to control like plants and selecting those plants or plant parts which are resistant to said agrochemical.] agrochemical; and

(d) selecting at least one plant or plant part which is resistant or tolerant to said agrochemical.

18. (Amended) [A] The method according to claim 15 [any one of claims 15 to 17] wherein said agrochemical comprises at least one of fomesafen [and/or] and acifluorfen.

19. (Amended) A transgenic plant or plant part [Plants or plant parts] obtained according to the method of claim 15 [any one of claims 15 to 18].

20. (Amended) The transgenic plant or plant part of [Plants or plant parts according to] claim 19 [which are] wherein said plant or plant part is a soybean plant or plant part [plants or plant parts].

22. (Amended) A method of providing a plant with [a further] an additionally desired agronomic [trait] trait, the method comprising:

(a) inserting a polynucleotide which encodes an additionally desired agronomic trait into [the] a genome of plant material from [a] the transgenic plant or plant part [according to] of claim 19 [or 20 a polynucleotide which provides for the desired agronomic trait]; and

(b) regenerating a plant or plant part [plants or plant parts] from said plant [material; or] material.

[(a) crossing a first plant or plant part according to claim 19 or claim 20 with a second plant which provides for said desired agronomic trait; and

(b) selecting those resultant plants which contain said further desired agronomic trait.]

23. (Amended) [A] The method according to claim 22 wherein said [further] additionally desired agronomic trait provides resistance to [a] an herbicide which comprises glyphosate or a salt thereof.

24. (Amended) A method of selectively controlling weeds in a field which comprises [said field comprising] crop plants and [weeds said] weeds, the method comprising applying to said field an agriculturally acceptable formulation of an agrochemical comprising at least one of fomesafen [and/or] and acifluorfen wherein [the] said crop plants [are] comprise [the] transgenic plants according to claim 19 [or 20].

26. (Amended) [A] An isolated protein comprising either an amino acid [the] sequence [depicted as SEQ ID No. 10] characterized by SEQ ID NO:10 or [a protein] an amino acid sequence variant thereof having a Smith Waterman score greater than 766 calculated using [the] a FASTA3 [algorithm] algorithm, wherein [the] said amino acid sequence [protein] variant [still] encodes a Glutathione-S-transferase.

27. (Amended) [A] An isolated protein comprising either an amino acid [the] sequence [depicted as SEQ ID No. 1] characterized by SEQ ID NO:1 or [a protein] an amino acid sequence variant thereof having a Smith-Waterman score greater than 2152 calculated using [the] a FASTA3 [algorithm] algorithm, wherein [the] said [protein] amino acid sequence variant [still] encodes a homoglutathione synthetase.